

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

A NEW BOTRYCHIUM FROM ALABAMA.

BY WILLIAM R. MAXON.

By permission of the Secretary of the Smithsonian Institution.

Through the courtesy of Mr. W. C. Dukes of Mobile, Alabama, the U. S. National Herbarium has received within the last year an excellent series of an unusually interesting Botrychium, from the vicinity of Mobile, which is apparently undescribed. The writer's views as to the propriety of recognizing the various well-marked component forms of the *ternatum* group as full species, in those instances in which intermediates are not known, were expressed at some length* less than a year ago and need not be repeated. The present form, whose relationship will be discussed below, may appropriately be known as

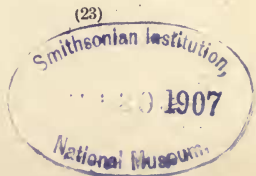
Botrychium Alabamense sp. nov.

A slender delicate plant of the *ternatum* group, 20-30 cm. high, branching at or above the surface of the ground. Stem 2-3.5 cm. long, 2-3 mm. in diameter, pale or salmon-colored, clothed below with a fibrous sheath and emitting numerous stout spreading roots. Sterile division bright green, short- or frequently long-petiolate (average 2.5 cm.), about 12 cm. broad by 11 cm. long, fully tripinnate, or quadripinnatifid as to the basal portion of the lowermost lateral divisions, variable in outline but commonly sub-pentagonal, the lateral divisions usually alternate; ultimate segments (in normal mature plants) approximate, or somewhat distant, alternate, oblique, broadly obovate, 5-10 mm. broad, subequally and strongly cuneate to a narrow adnate base, rarely with a shallow lateral lobe; margins unequally and conspicuously fimbriate, particularly in the larger specimens; texture thin, flaccid, the veins readily perceptible. Sporophyll averaging 22 cm. in length, slender, often arcuate or even flexuose, uniformly of a decided salmon color (excepting the apical third) as are also the main vascular parts of the sterile division; panicle 7-10 cm. long, bipinnate or rarely tripinnate, basal branch averaging 3.5 cm. in length.

Known to the writer only from the vicinity of Mobile, Alabama, and chiefly through a fine series collected by Mr. Dukes at Spring Hill, at an

* A New Botrychium from Jamaica.—Bull. Torrey Club 32: 219-222. 1905.

5—PROC. BIOL. SOC. WASH., VOL. XIX, 1906.



elevation of 200 feet, some six or seven miles west of that city. Of these specimens, No. 510,782, U. S. National Herbarium, collected in August, 1905, is designated as type. The only other material seen is a single sheet of small plants collected somewhere in the vicinity of Mobile by the late Dr. Chas. Mohr, who regarded them as "an ambiguous form" which he was unable to place with certainty.

The following note on habitat is kindly contributed by Mr. Dukes:

"Nearly all the material of this plant [*B. Alabamense*] has been found at Spring Hill. * * * The few isolated plants so far found at lower elevations were small and nearly always misshapen. The best specimens are invariably found in open thickets under the shelter of cedars and yaupon trees or along yaupon hedges at the edges of old abandoned fields and pastures. Like all the *Botrychia* in this section it is found in colonies of from two or three to often as many as fifty or more. * * * It puts up its new frond after the late summer rains, towards the middle of August, at about the same time as *B. tenuifolium*, and is often found growing in close proximity to the latter; indeed, you seldom find one without finding the other also. The fruiting fronds develop ordinarily from the middle of September to the first of October but vary several weeks according to weather conditions; during dry seasons they are late in appearing."

The present form stands somewhat between *B. obliquum* and *B. biternatum*. From the former, which in a typical state is apparently altogether wanting from Alabama, it differs conspicuously in its lax habit, usually longer-stalked divisions and short rounded segments. From the latter species, which is well known for its unique seasonal character (*i. e.* fruiting in early spring), it departs otherwise in the greater size of all its parts, its non-prostrate habit, decidedly thinner texture and less divaricate branching. In a way, however, dwarfed plants of *B. Alabamense* and uncommonly robust specimens of *B. biternatum* simulate each other rather closely and offer a possible suggestion as to the origin of the latter. Further discussion of their relationship may well be deferred until the publication of a paper which Mr. Dukes has prepared, descriptive of *B. biternatum* as it occurs in Alabama, with particular reference to its peculiar seasonal appearance. But whatever their phylogeny may have been it appears scarcely open to question that the two are at the present time specifically distinct.

Incidentally it may be mentioned that the plants to which Mr. Dukes refers as *B. tenuifolium* are much larger than those originally described by Professor Underwood and not altogether typical in cutting.